

**SCREENING METHODS INVOLVING
THE DETECTION OF SHORT-LIVED PROTEINS**

Inventor: Xianqiang Li, Xin Jiang

ABSTRACT

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A method is provided for screening for agents that affect protein degradation rates, the method comprising: taking a library of cells, the cells expressing a fusion protein comprising a reporter protein and a protein encoded by a sequence from a cDNA library derived from a sample of cells, the sequence from the cDNA library varying within the cell library; contacting the library of cells with a plurality of agents which may affect protein degradation rates; for each agent, selecting cells in the library which express short-lived proteins based on whether the cells have different reporter signal intensities than other cells in the library, the difference being indicative of the selected cells expressing shorter lived fusion proteins than the fusion proteins expressed by the other cells in the library; and characterizing the fusion proteins expressed by the selected cells for each agent.

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